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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,819	09/22/2003	Calvin R. Krusen	TGR-102US	1025
23122	7590	12/06/2005	EXAMINER	
RATNERPRESTIA			ROSENBERGER, RICHARD A	
P O BOX 980			ART UNIT	
VALLEY FORGE, PA 19482-0980			PAPER NUMBER	
			2877	

DATE MAILED: 12/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/667,819

Applicant(s)

KRUSEN, CALVIN R. 

Examiner

Richard A. Rosenberger

Art Unit

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– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9/22/03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/22/03; 7/11/05</u> . | 6) <input type="checkbox"/> Other: _____ |

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 18, 21, 26 and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Zare et al (US 6,233,052).

As in claim 1, the reference shows, in figure 3, a system for measuring gas in a resonant cavity (110) a least one light source (laser 118) for generating radiation, a controller (locking servo 144 and scanner 152, taken together) coupled to the light source for controlling a frequency (wavelength) of the radiation (see column 10, lines 5-7), and a processor (100) coupled to the cavity for determining the absorption of the gas in the cavity.

Similarly for independent claims 26 and 29.

As is claim 2, the frequency is varied over a predetermined time period set by the scanning means 152.

As in claim 18, the system determine the absorption based on a ring-down rate.

As in claim 21, there is a "coupler" (mirror 112) for coupling the light into the cavity.

4. Claims 3-17, 19, 20, 22-25, and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zare et al (US 6,233,052) in view of Tell et al (US 5,173,749).

Zare et al does not teach the details of the scanning of the frequency by scanning unit 152 (although the reference does mention the control of the temperature to adjust the wavelength; see column 9, lines 54-56)

It is known in the art to control the frequency (wavelength) of a laser by controlling the temperature of the laser and the current fed to the laser; see Tell et al; see in particular the control of both in figure 10a.

As in claims 6, 11-14, 22, 23, 25, and 28, it would have been obvious to use these known techniques to control and scan the wavelength as taught by Zare et al because those in the art would have been able to use such known techniques to complete the disclosure of Zare et al. As in claims 2-5, 7-10, 15-17, 24 and 27, those in the art could have, using only ordinary skill in the art, choose appropriate scanning patterns, such as a sawtooth or triangular waveform, to implement the scanning of Zare et al.

As to claims s 19 and 20, Zare et al teaches a system which measures at a single wavelength. It is so well known in the art that measurements at a plurality of wavelengths can be useful that official notice can be taken. Thus it would have been obvious to take a plurality of measurements at different wavelengths as in claim 19, and to provide a plurality of light sources capable of emitting light at the wavelengths of

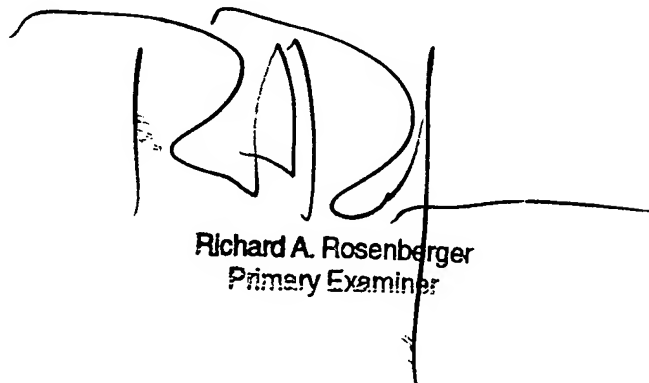
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interest because this would increase the usefulness of the system and the amount of information obtainable from the system about the gas being measured.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard A Rosenberger whose telephone number is (571) 272-2428. The examiner can normally be reached on Monday through Friday during the hours of 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr. can be reached on (571) 272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

R. A. Rosenberger
1 December 2005



Richard A. Rosenberger
Primary Examiner